

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
6 May 2004 (06.05.2004)

PCT

(10) International Publication Number  
WO 2004/037738 A1

(51) International Patent Classification<sup>7</sup>: C03C 17/00,  
H01J 61/70

(21) International Application Number:  
PCT/TB2003/004273

(22) International Filing Date:  
26 September 2003 (26.09.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
02079418.6 23 October 2002 (23.10.2002) EP

(71) Applicant (for all designated States except US): KONIN-  
KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL];  
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): HENDRIKS, Rene,  
J. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindh-  
hoven (NL). SNLJKERS-HENDRICKX, Ingrid, J., M.  
[BE/BE]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven  
(NL). BROERSMA, Rémy, C. [NL/FR]; c/o Prof. Holst-  
laan 6, NL-5656 AA Eindhoven (NL). DREUNING, Hen-  
drik-Jan [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA  
Eindhoven (NL).

(74) Agent: VAN WERMESKERKEN, Stephanie, C.;  
Philips Intellectual Property & Standards, Prof. Holstlaan  
6, NL-5656 AA Eindhoven (NL).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,  
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,  
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,  
MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,  
RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,  
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

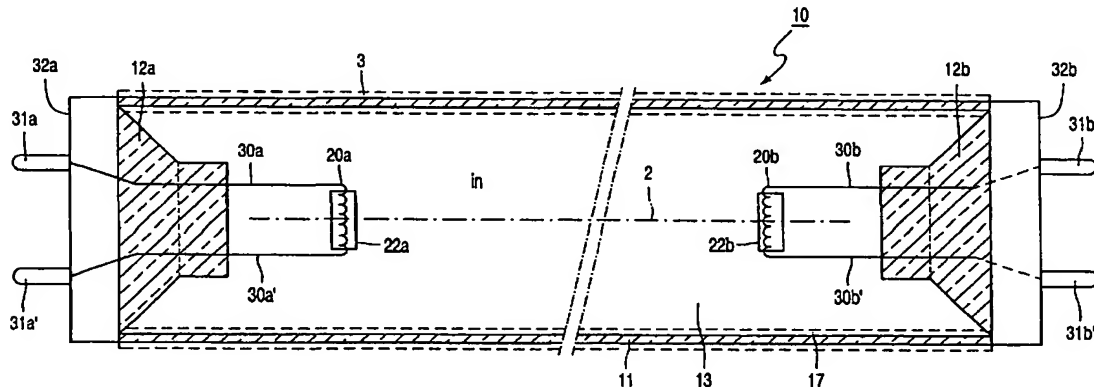
(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted  
a patent (Rule 4.17(ii)) for the following designations AE,  
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,  
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES,  
FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH,  
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,  
TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO  
patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG,  
ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU,  
TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE,

[Continued on next page]

(54) Title: LOW-PRESSURE MERCURY VAPOR DISCHARGE LAMP



(57) Abstract: The low-pressure mercury vapor discharge lamp has a light-transmitting discharge vessel (10), enclosing a discharge space (13) provided with mercury and a rare gas and comprising means for maintaining a discharge in the discharge space. At least a part of the discharge vessel is provided with a luminescent layer (17) of a luminescent material. At least an outer portion of the discharge vessel is provided with a coating (3). According to the invention, the coating comprises a pigment which absorbs part of the visible light and/or the coating comprises reflecting particles. The coating comprises a network obtainable through conversion of an organically modified silane by means of a sol-gel process. The organically modified silane is selected from the group formed by compounds of the structural formula  $\text{RISi(ORII)}_3$ , wherein RI is an alkyl group or an aryl group and RII is an alkyl group.